IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	New York, New York
Junichi MATSUDA	Date: December 27, 2000
Serial No.:	Group Art Unit:
Filed:	Examiner:

For: COMMUNICATION PATH CONTROL METHOD FOR DATA NETWORKS USING HIGH-SPEED BUSES INTERCONNECTED BY BRIDGES

Asst. Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to examination, please amend the application as follows:

IN THE CLAIMS:

Please amend claims 11-24 as follows.

Claim 11,   line 1, delete "or 9".

Claim 12,   line 1, delete "or 10".

Claim 13,   line 1, delete "or 9".

Claim 14,   line 1, delete "or 10".

Claim 15,   line 1, delete "or 13".

Claim 16,   line 1, delete "or 14".

Claim 17,   line 1, delete "or 13".

Claim 18,   line 1, delete "or 14".

Claim 19,   line 1, delete "or 13".

Claim 20, line 1, delete "or 14".

Claim 21, line 1, delete "or 13".

Claim 22, line 1, delete "or 14".

Claim 23, line 1, delete "or 13".

Claim 24, line 1, delete "or 14".

Please add the following new claims 43-82.

--43. A communication path control method according to claim 9 further comprising the steps of:

searching the first and second portals of the bridge being respectively connected with the first and second buses that construct parts of a communication path to be established, and

incrementing the counters of the first and second portals by '1' to establish the communication path using the first and second buses being interconnected together by means of the bridge.

44. A communication path control method according to claim 10 further comprising the steps of:

searching the first and second portals of the bridge being respectively connected with the first and second buses that construct parts of a communication path to be established; and

incrementing the counters of the first and second portals by '1' to establish the communication path using the first and second buses being interconnected together by means of the bridge.

45. A communication path control method according to claim 9 further comprising the step of:

decrementing the counters of the first and second portals by '1' to release the communication path that is established in advance by using the first and second buses being interconnected together by means of the bridge.

46. A communication path control method according to claim 10 further comprising the step of:

decrementing the counters of the first and second portals by '1' to release the communication path that is established in advance by using the first and second buses being interconnected together by means of the bridge.

47.   A communication path control method according to claim 43 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

48. A communication path control method according to claim 13 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

49.   A communication path control method according to claim 45 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

50. A communication path control method according to claim 44 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

51. A communication path control method according to claim 14 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first

and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

52. A communication path control method according to claim 46 wherein the counters of the first and second portals are changed by '1' after completion of a search of the first and second portals of the bridge that exists in the communication path being established between a transmitting node and a receiving node.

53. A communication path control method according to claim 43 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

54. A communication path control method according to claim 13 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

55. A communication path control method according to claim 45 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

56. A communication path control method according to claim 44 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

57. A communication path control method according to claim 14 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

58. A communication path control method according to claim 46 wherein a process of changing the counters of the first and second portals by '1' is repeated from one end of the communication path to another end of the communication path.

59. A communication path control method according to claim 43 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

60. A communication path control method according to claim 13 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

61. A communication path control method according to claim 45 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

62. A communication path control method according to claim 44 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

63. A communication path control method according to claim 14 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

64. A communication path control method according to claim 46 wherein each of the first and second buses that construct parts of the communication path interconnects thereon at least one node which installs a control means for searching portals depending on the communication path and changing their counters in value under a request.

65. A communication path control method according to claim 43 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the

communication path is to be established or released on the basis of the identifiers extracted from the node.

66. A communication path control method according to claim 13 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the communication path is to be established or released on the basis of the identifiers extracted from the node.

67. A communication path control method according to claim 45 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the communication path is to be established or released on the basis of the identifiers extracted from the node.

68. A communication path control method according to claim 44 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the communication path is to be established or released on the basis of the identifiers extracted from the node.

69. A communication path control method according to claim 14 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the communication path is to be established or released on the basis of the identifiers extracted from the node.

70. A communication path control method according to claim 46 wherein the data network interconnects therein at least one node for searching portals existing on the communication path and storing identifiers of the portals being searched, so that the communication path is to be established or released on the basis of the identifiers extracted from the node.

71. A communication path control method according to claim 43 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on a IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

72. A communication path control method according to claim 13 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on a IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

73. A communication path control method according to claim 45 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on a IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

74. A communication path control method according to claim 44 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on an IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

75. A communication path control method according to claim 14 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on an IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

76. A communication path control method according to claim 46 wherein each portal provides transfer information for determination whether to transfer asynchronous packets based on an IEEE 1394 standard being received from its own bus connected thereto to another bus or not, said communication path control method further comprising the steps of:

extracting the transfer information from all portals connected with a transmitting bus on the communication path;

designating a portal providing transfer information representing transfer of the asynchronous packets to a receiving node of a receiving bus on the communication path; and

requesting an adjacent portal of the designated portal in a same bridge to search portals that exist on the communication path.

77. A communication path control method according to claim 71 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.

78. A communication path control method according to claim 72 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.

79. A communication path control method according to claim 73 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.

80. A communication path control method according to claim 74 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.

81. A communication path control method according to claim 75 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.

82. A communication path control method according to claim 75 further comprising the steps of:

periodically transmitting to each of portals that construct parts of the communication path prescribed asynchronous packets;

making determination that a specific bus connected with a specific portal which do not respond to the prescribed asynchronous packets being periodically transmitted is disconnected from the data network; and

disconnecting the communication path using the specific portal connected with the specific bus.--

REMARKS

This Preliminary Amendment is submitted to change the multiple dependent claims to single dependent claims in order to eliminate the improper multiple dependent claims and to reduce the government filing fee.
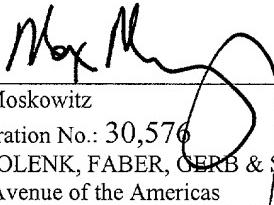
Respectfully submitted,

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